

IN THE CLAIMS:

1. (currently amended) A method for reconstructing an image of an object in a computed tomographic imaging system, said method comprising:

scanning an object using a computed tomographic (CT) imaging apparatus to acquire projections of the object;

determining a set of thresholds utilizing ~~said the~~ projections;

associating selected smoothing kernels with ~~said the~~ thresholds;

utilizing ~~said, via the computed tomographic imaging system, the~~ smoothing kernels and ~~said the~~ projections to produce three-dimensional smoothed projections in accordance with ~~said the~~ thresholds; and

filtering and backprojecting the three-dimensional smoothed projections to generate an image of the object in the computed tomographic imaging system.

2. (currently amended) A method in accordance with Claim 1 wherein said determining a set of thresholds comprises determining a set of four thresholds ~~comprising~~ including a high threshold, a medium threshold, a low threshold, and a very low threshold, and wherein ~~a one of the smoothing kernel kernels~~ is associated with each ~~said threshold of the thresholds~~.

3. (currently amended) A method in accordance with Claim 2 wherein a one-to-one correspondence exists between ~~said the~~ smoothing kernels and ~~said the~~ thresholds.

4. (canceled)

5. (currently amended) A method in accordance with Claim 1 wherein said utilizing ~~the~~ smoothing kernels and ~~said the~~ projections ~~to produce smoothed projections~~ comprises utilizing a smoothing gain factor to modulate smoothing of ~~said the~~ smoothed projections.

6. (currently amended) A method in accordance with Claim 5 wherein ~~said the~~ smoothing gain factor is a function of ~~said the~~ projections.

7.-14. (canceled)

15. (currently amended) A CT imaging apparatus comprising:

a detector;

a source configured to project a beam of x-rays toward said detector; and

a computer system operatively coupled to at least one of said detector and said source,  
said computer system comprising:

a first module configured to scan an object to acquire projections of the object;

a second module configured to determine a set of thresholds utilizing ~~said-the~~ projections;

a third module configured to associate selected smoothing kernels with ~~said-the~~ thresholds;

a fourth module configured to utilize ~~said-the~~ smoothing kernels and ~~said-the~~ projections to produce three-dimensional smoothed projections in accordance with ~~said-the~~ thresholds; and

a fifth module configured to filter and backproject the three-dimensional smoothed projections to generate an image of the object.

16. (currently amended) An apparatus in accordance with Claim 15 wherein, to determine ~~a-the~~ set of thresholds, said second module is configured to determine a set of four thresholds ~~comprising-including~~ a high threshold, a medium threshold, a low threshold, and a very low threshold[[,]] and to associate ~~a-one of the~~ smoothing kernel ~~kernels~~ with each ~~said threshold of the thresholds~~.

17. (currently amended) An apparatus in accordance with Claim 16 wherein ~~said the~~ smoothing kernels and ~~said-the~~ thresholds exist in one-to-one correspondence.

18. (canceled)

19. (currently amended) An apparatus in accordance with Claim 15 wherein, to utilize ~~the~~ smoothing kernels and ~~said-the~~ projections to produce ~~the~~ three-dimensional

smoothed projections, said fourth module is configured to utilize a smoothing gain factor to modulate smoothing of ~~said the~~ smoothed projections.

20. (currently amended) An apparatus in accordance with Claim 19 wherein ~~said the~~ smoothing gain factor is a function of ~~said the~~ projections.

21.-28. (canceled)

29. (currently amended) A ~~computer-readable-computer storage medium having comprising~~ instructions thereon, ~~said instructions~~ configured to instruct a computer to:

determine a set of thresholds utilizing projections obtained by scanning an object;

associate selected smoothing kernels with ~~said the~~ thresholds;

utilize ~~the~~ smoothing kernels and ~~said the~~ projections to produce three-dimensional smoothed projections in accordance with ~~said the~~ thresholds; and

filter and backproject the three-dimensional smoothed projections to generate an image of the object.

30. (currently amended) A ~~computer-readable-computer storage medium~~ in accordance with Claim 29 wherein, to determine ~~a the~~ set of thresholds, said ~~computer-readable-medium is instructions are further configured~~ to instruct the computer to determine a set of four thresholds ~~comprising-including~~ a high threshold, a medium threshold, a low threshold, and a very low threshold[,]] and to associate ~~a one of the~~ smoothing kernel ~~kernel~~s with each ~~said threshold of the thresholds~~.

31. (currently amended) A ~~computer-readable-computer storage medium~~ in accordance with Claim 30 wherein ~~said the~~ smoothing kernels and ~~said the~~ thresholds exist in one-to-one correspondence.

32. (canceled)

33. (currently amended) A ~~computer-readable-computer storage medium~~ in accordance with Claim 29 wherein, to utilize ~~the~~ smoothing kernels and ~~said the~~ projections to produce ~~the~~ three-dimensional smoothed projections, said ~~machine-readable-medium is~~

instructions are further configured to instruct the computer to utilize a smoothing gain factor to modulate smoothing of ~~said the~~ smoothed projections.

34. (currently amended) A ~~computer-readable~~ computer storage medium in accordance with Claim 33 wherein ~~said the~~ smoothing gain factor is a function of ~~said the~~ projections.

35.-42. (canceled)